

see similar files: http://farbe.li.tu-berlin.de/ME96/ME96.HTM  
http://130.149.60.45/~farbmetrik or http://farbe.li.tu-berlin.de

TUB registration: 20190801-ME96/ME96L0N2.TXT /.PS  
application for measurement of display output

TUB material: code=rh4ta

percieved color terms (colorness: cube root coordinates)

percieved color terms	name and relationship with standard chromaticity values	notes:
<b>lightness</b>	$L^* = 116 ( Y / 100 )^{1/3} - 16$ Aproximation: $L^* = 100 ( Y / 100 )^{1/3}$	definition 1976 in: CIELUV, CIELAB
<b>chroma</b>	for nonlinear chroma diagram ( $a^*$ , $b^*$ )	
red-green	$a^* = 500 [ ( X / X_n )^{1/3} - ( Y / Y_n )^{1/3} ]$ $= 500 ( a' - a'_n ) Y^{1/3}$	definition 1976 in: CIELAB
yellow-blue	$b^* = 200 [ ( Y / Y_n )^{1/3} - ( Z / Z_n )^{1/3} ]$ $= 500 ( b' - b'_n ) Y^{1/3}$	$n=D65$ (surround)
radial	$C^*_{ab} = [ a^{*2} + b^{*2} ]^{1/2}$	
<b>saturation</b>	= chroma / lightness	
red-green	$S^*_a = a^* / [ 100 ( Y / 100 )^{1/3} ]$ $= 21,6 ( a' - a'_n )$	definition for:
yellow-blue	$S^*_b = b^* / [ 100 ( Y / 100 )^{1/3} ]$ $= 21,6 ( b' - b'_n )$	CIELAB 1976
radial	$S^*_{ab} = C^*_{ab} / [ 100 ( Y / 100 )^{1/3} ]$ $= 21,6 [ ( a' - a'_n )^2 + ( b' - b'_n )^2 ]^{1/2}$	
<b>chromaticity</b>	for nonlinear chromaticity diagram ( $a'$ , $b'$ )	
red-green	$a' = ( 1 / X_n )^{1/3} ( x / y )^{1/3}$ $= 0,2191 ( x / y )^{1/3}$ for D65	definition for opponent
yellow-blue	$b' = -0,4 ( 1 / Z_n )^{1/3} ( z / y )^{1/3}$ $= -0,08376 ( z / y )^{1/3}$ for D65	color system
radial	$c'_{ab} = [ ( a' - a'_n )^2 + ( b' - b'_n )^2 ]^{1/2}$	

1-003000-L0 ME961-7N

